Application No.: 10/656,182 Docket No.: M4065.0248/P248-C

Reply to Office Action dated March 23, 2005

AMENDMENTS TO THE CLAIMS

1-73. (Canceled)

74. (Previously presented) A copper bond pad for a semiconductor device,

said bond pad comprising:

a dielectric layer formed over a substrate of said semiconductor device;

a barrier layer formed over said dielectric layer;

a copper layer formed over said barrier layer, said copper layer having an

upper surface implanted with titanium, said copper layer having a thickness of about

500 Angstroms to about 20,000 Angstroms; and

an insulating layer over said copper layer.

75. (Currently amended) The copper band pad of Figure claim 74, wherein

said upper surface of said copper layer implanted with titanium has a thickness of

about 50 Angstroms to about 200 Angstroms.

76. (Currently amended) The copper band pad of Figure claim 74 further

comprising a passivation layer formed in contact with said copper layer, wherein said

passivation layer is formed of a material selected from the group consisting of silicon

oxide, oxynitride, silicon nitride, borophosphosilicate glass and polyimide.

77. (Currently amended) The copper band pad of Figure claim 76 further

comprising a via formed in said insulating layer and said passivation layer, said via

exposing a portion of said copper layer and defining said bonding pad area.

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78. (Currently amended) The copper band pad of Figure claim 74, wherein said dielectric layer is formed of a material selected from the group consisting of phosphosilicate glass, borophosphosilicate glass, silicon oxide, silicon nitride, and silicon oxynitride.

79. (Currently amended) An interconnect structure for a semiconductor die, said interconnect structure comprising:

a conductive bond pad containing a copper layer, said copper layer containing a copper oxide layer thereon; and

a titanium-aluminum-copper-nitrogen layer formed over at least an upper surface portion of said copper layer.

- 80. (Previously presented) The interconnect structure of claim 79, wherein said copper layer is elemental copper.
 - 81. (Canceled)
- 82. (Currently amended) The interconnect structure of claim [[81]] <u>79</u>, wherein said copper oxide layer has a thickness not greater than 300 Angstroms.
- 83. (Previously presented) The interconnect structure of claim 79 further comprising an electrical conductor bonded to said titanium-aluminum-copper-nitrogen layer.